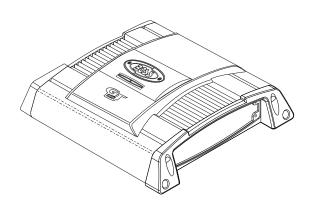


## Service Manual



**MODEL: GT1280** 

# **SPECIFICATIONS**

Maximum power output (2 Ohms): 500W x 4ch

RMS power Output: 200W x 4ch Bridged Power Output: 1000W x 2ch Frequency response: 9Hz - 50KHz

S/N Ratio: 103dB

Low Pass Crossover (Variable) 45Hz - 90Hz

High Pass Crossover (Fixed) 150Hz Bass Boost (Variable) 0 - +18dB Power Source Voltage: 14.4V

Ground: Negative

External dimensions: 236(W)x55(H)x520(D)mm

# To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

#### 1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them. The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

- 2. Place the parts and wiring back in their original positions after replacement or re-wiring. For proper circuit construction, use of insulation tubes, bonding, gaps to PCB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection. If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
- 3. Check for safety after repair. Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots. If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
- 4. Caution in removal and making wiring connection to the parts for the automobile. Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

#### 5. Cautions regarding chips.

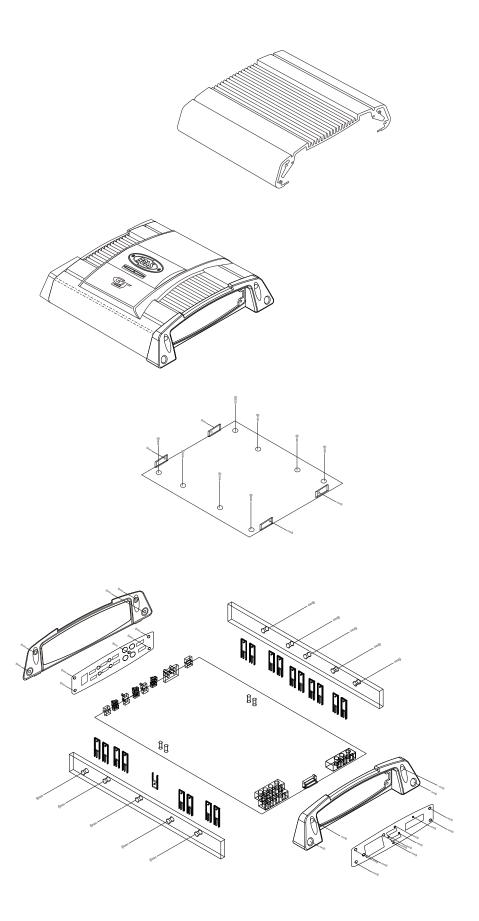
Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.

#### 6. Cautions in handling flexible PCB

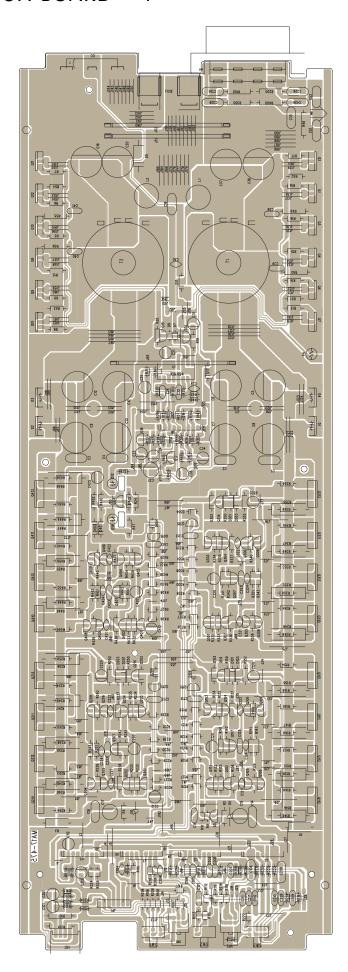
Before working with a soldering iron, make sure that the iron tip temperature is around 270... Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.

7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

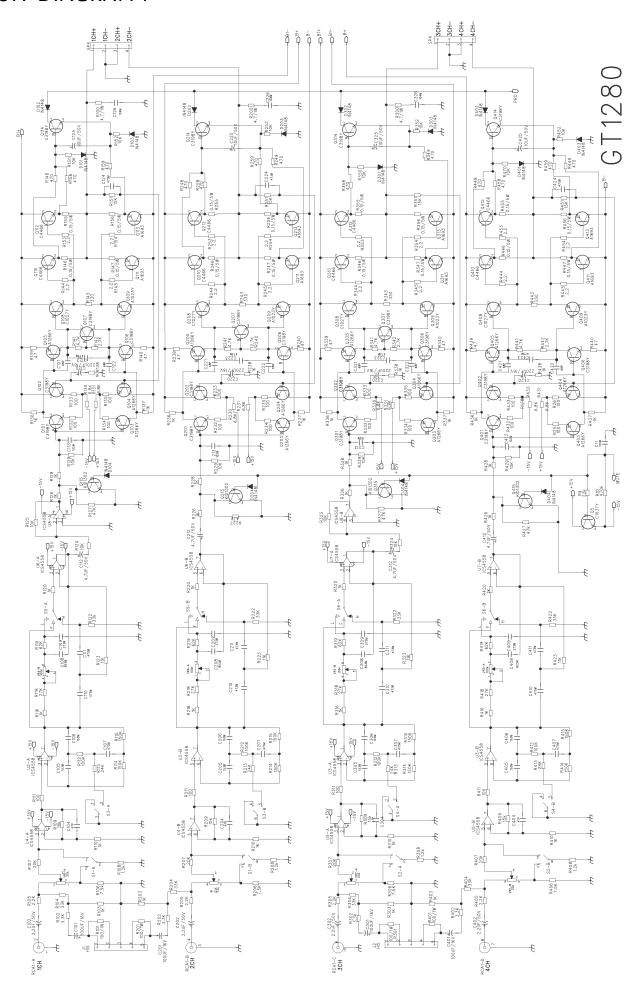
## **EXPLODED VIEW**



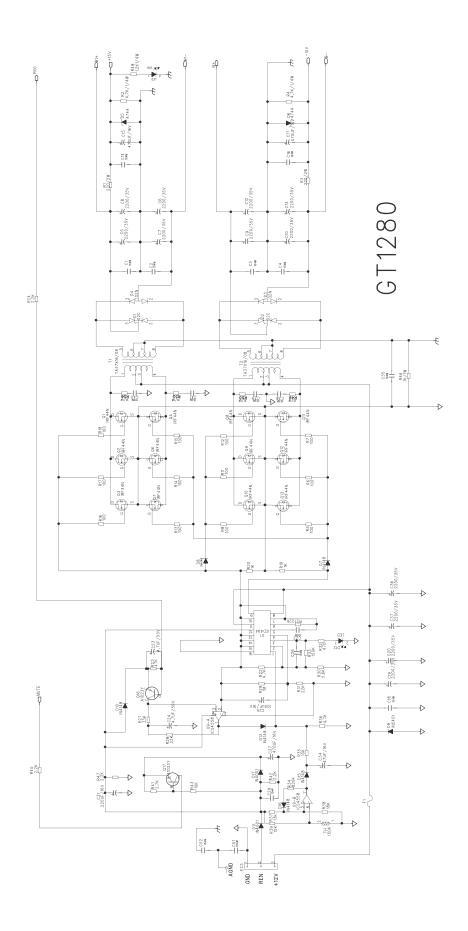
### PRINTED CIRCUIT BOARD - 1



#### **CIRCUIT DIAGRAM 1**



## **CIRCUIT DIAGRAM 2**



## PARTS LIST - 1

| Part Number      | desc              | Location   | qty |
|------------------|-------------------|--|-----|
| CR-40091X0-VOS00 | 4 Pin RCA Jack    |  | 1   |
| CT-SOCKET0-3MA22 | Power terminal    |  | 1   |
| CT-SOCKET0-8MA17 | Speaker terminal  |  | 1   |
| CW-50000X0-H0025 | High Input Jack   |  | 2   |
| EC-C4104X0-Z6769 | C Cap 0.1(Z)      | C29,30   | 2   |
| EC-C4220X0-D5050 | C Cap 22PF(D)     | C124,224,324,424   | 4   |
| EC-C4470X0-Z5050 | C Cap 47PF(Z)     | C104,204,304,404   | 4   |
| EC-C4680X0-J5050 | C Cap 68PF(J)     | C121,122,221,222,321,322,421,422                                 | 8   |
| EC-E2107X0-M50A1 | E Cap 100UF/16    | C25,28,101,201,301,401   | 6   |
| EC-E2227X0-M63A1 | E Cap 220UF/16    | C21,27,120,220,320,420,31  | 7   |
| EC-E2476X0-M50A1 | E Cap 47UF/16V    | C34  | 1   |
| EC-E2477X0-MA0A3 | E Cap 470UF/16    | C15,17   | 2   |
| EC-E4106X0-M50A1 | E Cap 10UF/50V    | C125,225,325,425   | 4   |
| EC-E4225X0-M50A1 | E Cap 2.2UF/50    | C102,202,302,402   | 4   |
| EC-E4475X0-M50A1 | E Cap 4.7UF/50    | C23,24,112,212,312,412   | 6   |
| EC-E6228X0-MA3B5 | E Cap 2200/35V    | C5~10,12,13,19,20,36,37  | 12  |
| EC-M5102X0-J5590 | Mylar Cap 0.001   | C11,22,113,313,413,213   | 6   |
| EC-M5103X0-J5590 | Mylar Cap 0.01    | C26,38,39,40,41  | 5   |
| EC-M5104X0-JA0A3 | Mylar Cap 0.1     | C1~4,14,16,18,35,51,52,126,226,326,426                           | 14  |
| EC-M5153X0-J5785 | Mylar Cap 0.015   | C105,106,205,206,305,306,405,406                                 | 8   |
| EC-M5273X0-J66A1 | Mylar Cap 0.027   | C109,209,309,409   | 4   |
| EC-M5473X0-J80A1 | Mylar Cap 0.047   | C107,110,111,207,210,211,307,310,311,407,410,411,123,223,323,423 | 16  |
| EC-M5823X0-K0000 | Mylar Cap 0.082J  | C108,208,308,408   | 4   |
| ED-R2502C0-H0000 | Diode ESAC25-02C  | D1,2   | 2   |
| ED-R2502N0-H0000 | Diode ESAC25-02N  | D3,4   | 2   |
| ED-R4001X0-H0000 | Diode IN-4001     | D11,17   | 2   |
| ED-R5401X0-H0000 | Diode IN-5401     | D9   | 1   |
| ED-S4148X0-H0000 | Diode IN-4148     | D7,8,10,13~16,18,101~104,201~204,301~304,401~404                 | 24  |
| ED-Z15VXX0-H4744 | ZENER IN4744      | D5,6   | 2   |
| EE-R225X70-76002 | LED Red 2.5X7MM   |  | 1   |
| EE-R525X70-76002 | LED Green 2.5X7MM | D12  | 1   |
| EO-IMA7475-VXXX6 | Transformer       |  | 2   |
| EO-VMA924X-V8025 | coil              |  | 2   |
| ER-HG153X0-HXXXX | THERMISTOR 150K   |  | 1   |
| ER-OG022X0-H2526 | Resistor 2.2 1/4W | R144,145,153,154,244,245,253,254,344,345,353,354,444,445,453,454 | 16  |

## PARTS LIST - 2

| Part Number      | desc               | Location   | qty |
|------------------|--------------------|--|-----|
| ER-OG047X0-HA04C | Resistor 4.7 1W    | R100,200,300,400   | 4   |
| ER-OG100X0-HA04C | Resistor 10 1W     | R56,55,49,50   | 4   |
| ER-OG101X0-H1214 | Resistor 100 1/8W  | R45,111,211,311,411  | 5   |
| ER-OG101X0-H2526 | Resistor 100 1/4W  | R5~8,11~18,132~135,232~235,332~335,432~435                   | 28  |
| ER-OG101X0-HA04C | Resistor 100 1W    | R101,201,301,401   | 4   |
| ER-OG102X0-H1214 | Resistor 1K 1/8W   | R44,103,110,116,120,126,128,138,203,210,216,220,226,228,238, | 29  |
|                  |                    | 303,310,316,320,326,000,000,000,000,000,000,000,000,000      |     |
| ER-OG102X0-H2526 | Resistor 1K 1/4W   | R19,20,136,137,236,237,336,337,436,437                       | 10  |
| ER-OG102X0-HA04C | Resistor 1K 1W     | R46  | 1   |
| ER-OG103X0-H1214 | Resistor 10K 1/8W  | R35,43,109,124,125,129,209,229,309,324,325,329,409,429       | 22  |
| ER-OG103X0-H2526 | Resistor 10K 1/4W  | R150,152,250,252,350,352,452,470                             | 8   |
| ER-OG104X0-H1214 | Resistor 100K 1/8W | R112,212,312,412   | 4   |
| ER-OG105X0-H1214 | Resistor 1M 1/8W   | R29  | 1   |
| ER-OG123X0-H1214 | Resistor 12K 1/8W  | R123,223,323,423   | 4   |
| ER-OG123X0-H2526 | Resistor 12K 1/4W  | R47  | 1   |
| ER-OG152X0-H1214 | Resistor 1.5K 1/8W | R108,208,308,408   | 4   |
| ER-OG153X0-H1214 | Resistor 15K 1/8W  | R37,39   | 2   |
| ER-OG153X0-H2526 | Resistor 15K 1/4W  | R151,251,351,451   | 4   |
| ER-OG154X0-H1214 | Resistor 150K 1/8W | R33,114,115,214,215,314,315,414,415                          | 9   |
| ER-OG183X0-H1214 | Resistor 18K 1/8W  | R38  | 1   |
| ER-OG203X0-H1214 | Resistor 20K 1/8W  | R107,207,307,407   | 4   |
| ER-OG221X0-H1214 | Resistor 220 1/8W  | R38,39   | 2   |
| ER-OG221X0-H2526 | Resistor 220 1/4W  | R51,52,53,54   | 4   |
| ER-OG222X0-H1214 | Resistor 2.2K 1/8W | R42,105,205,305,405,48                                       | 6   |
| ER-OG222X0-H2526 | Resistor 2.2K 1/4W | R24  | 1   |
| ER-OG223X0-H1214 | Resistor 22K 1/8W  | R21,28,31  | 3   |
| ER-OG243X0-H1214 | Resistor 24K 1/8W  | R113,213,313,413   | 4   |
| ER-OG272X0-H1214 | Resistor 2.7K 1/8W | R41  | 1   |
| ER-OG272X0-H2526 | Resistor 2.7K 1/4W | R142,242,342,442   | 4   |
| ER-OG273X0-H1214 | Resistor 27K 1/8W  | R118,218,318,418   | 4   |
| ER-OG331X0-H2526 | Resistor 330 1/4W  | R143,243,343,443   | 4   |
| ER-OG332X0-H1214 | Resistor 3.3K 1/8W | R102,202,302,402   | 4   |
| ER-OG333X0-H1214 | Resistor 33K 1/8W  | R9,10,27,104,122,204,222,304,322,404,422                     | 11  |
| ER-OG470X0-H2526 | Resistor 47 1/4W   | R139,140,239,240,339,340,439,440                             | 8   |
| ER-OG471X0-H1214 | Resistor 470 1/8W  | R32  | 1   |

## PARTS LIST - 3

| Part Number      | desc                 | Location   | qty |
|------------------|----------------------|--|-----|
| ER-OG471X0-H2526 | Resistor 470 1/4W    | 148,149,158,159,248,249,258,259,348,349,358,359,448,449,458,459  | 16  |
| ER-OG471X0-HA04C | Resistor 470 1W      | R1,3   | 2   |
| ER-OG472X0-H1214 | Resistor 4.7K 1/8W   | R22,36   | 2   |
| ER-OG472X0-H2526 | Resistor 4.7K 1/4W   | R2,4,141,241,341,441   | 6   |
| ER-OG473X0-H1214 | Resistor 47K 1/8W    | R23,127,227,327,427  | 5   |
| ER-OG562X0-H1214 | Resistor 5.6K 1/8W   | R30  | 1   |
| ER-OG623X0-H1214 | Resistor 62K 1/8W    | R119,219,319,419   | 4   |
| ER-OG682X0-H1214 | Resistor 6.8K 1/8W   | R130,131,230,231,330,331,430,431                                 | 8   |
| ER-OG752X0-H1214 | Resistor 7.5K 1/8W   | R106,206,306,406   | 4   |
| ER-OG824X0-H1214 | Resistor 820K 1/8W   | R34  | 1   |
| ER-WG.15X0-HXXXX | Resistor 0.15 5W     | R146,147,155,156,246,247,255,256,346,347,355,356,446,447,455,456 | 16  |
| ES-S2219X0-H0006 | Switch JSS2219       |  | 4   |
| ES-S23D29X-V0098 | Switch SK23D39       |  | 2   |
| ET-C1023X0-PY000 | Transistor KTA1023-Y | Q14~16,109,209,309,409   | 7   |
| ET-C1027X0-NY000 | Transistor KTC1027-Y | Q5,108,208,308,408   | 5   |
| ET-C1266X0-PY000 | Transistor A1266Y    | Q103~105,203~205,303~305,403~405,17                              | 13  |
| ET-C1302K0-N0000 | Transistor KTD-1302  | Q115,215,315,415   | 4   |
| ET-C1693X0-PY000 | Transistor 2SA1693   | Q111,113,211,213,311,313,411,413                                 | 8   |
| ET-C3198K0-NY000 | Transistor KTC3198-Y | Q101,102,106,107,114,201,202,206,207,214,301,302,306,307,314,    | 20  |
|                  |                      | 401,402,406,407,414,   |     |
| ET-C4466X0-NY000 | Transistor 2SC4466   | A312,Q110,112,210,212,310,410,412                                | 8   |
| ET-FFZ44X0-X0000 | Mosfet IRFZ 44N      | Q1~4,6~13  | 12  |
| II-4558LX0-V0008 | IC NJM4558L          | U2~6,IC7,8,9   | 8   |
| II-494P0X0-H0016 | IC KIA-494AP         | U1   | 1   |
| VR-BN104X0-V0A26 | VR 100KB T12         |  | 2   |
| VR-BN203X0-V0A26 | VR 20KB T12          |  | 2   |